

# VegeCleanse Plus™

*Synergistic blend of pea protein, greens, herbs, antioxidants to support phases I and II detoxification*



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**VegeCleanse Plus™** functional food powder contains a comprehensive combination of nutrients, antioxidants, herbs, fiber, and fruit and vegetable extracts that support the overall metabolic biotransformation process while balancing phase I and II detoxification pathways.\* This product aids the body's defenses against xenobiotics, pollutants and other harmful substances, as well as against remnants of some medications, excess steroid hormones, and the byproducts of normal, healthy metabolism.\*

## Detoxification Support

In the best of times, the body requires appropriate nutritional support for effective functioning of the liver's detoxification mechanisms. In the modern era of unavoidable environmental pollution, increased mental and physiological stress, and the degraded nutrient density of the food supply, even when following a nutritious, whole-foods diet, the body may require higher amounts of the particular amino acids, minerals, and other factors essential for healthy detoxification than from food alone.

In the liver, phase I reactions transform toxins and metabolic wastes into forms that are then metabolized by phase II enzymes. Phase I primarily involves cytochrome P450 enzymes, while phase II reactions conjugate the intermediate metabolites into forms that are more water-soluble, thereby facilitating their excretion. VegeCleanse Plus™ contains an array of nutrients specifically formulated to support both phase I and II processes. This is crucial, because if phase II reactions are sluggish—perhaps due to insufficiency of key conjugates and cofactors—then the intermediate products of phase I may accumulate and overwhelm the body's capacity to conjugate and excrete them. This can potentially lead to undesirable health complications, since some intermediate metabolites are highly reactive thus may be more harmful than the initial compounds.<sup>1,2</sup> A well-known example of this is the buildup of N-acetyl-p-benzoquinoneimine (NAPQI), which is a metabolite of acetaminophen that depletes glutathione levels and may result in impaired liver function, and, over time, liver failure.<sup>3</sup> Thus, when embarking on any healthy, safe detoxification program, it is imperative to ensure the proper functioning of both phase I and phase II pathways.

Like all enzymes, cytochrome P450 enzymes are proteins, and higher protein diets have been shown to increase the activity of these enzymes, while chronic high-carbohydrate intake may have the opposite effect.<sup>4,5</sup> The 17 grams of organic, non-GMO, low-allergen pea protein in each serving of VegeCleanse Plus™ ensures a steady supply of the individual amino acids required for effective detoxification—particularly the sulfur-containing amino acids—with no added sugar.

Studies in animals and humans indicate that multiple nutrient deficiencies can depress the function of several enzymatic reactions involved in detoxification. The insufficiency of vitamins A, C, E, B complex, folate, copper, iron, zinc, magnesium, calcium, and more, can have adverse effects on the body's ability to metabolize harmful compounds.<sup>6</sup> VegeCleanse Plus™ provides a wide array of nutrients to ensure sufficient levels of these critical enzyme cofactors.

## Highlights

**Glutathione and supportive nutrients:** Glutathione is well-known as the body's "master antioxidant." It is a key component of the detoxification system, acting as an antioxidant as well as participating in conjugation reactions.<sup>7</sup> As a hydrophilic molecule, it also aids in increasing the water-solubility of lipophilic toxins, thus facilitating their excretion. The cycling of glutathione between its oxidized and reduced forms, via glutathione reductase, requires riboflavin, niacin, and vitamins C and E, all of which are present in VegeCleanse Plus™. Part of the biochemical action of glutathione is accomplished via the glutathione peroxidase enzyme family (GPx),<sup>8</sup> which is dependent on selenium (also included in this product). GPx neutralizes harmful lipid peroxides and also reduces hydrogen peroxide safely to water. Additionally, VegeCleanse Plus™ contains N-acetyl-cysteine – a precursor to glutathione – as well as cysteine and glycine, which are two of the three amino acids that comprise glutathione.

**Sulfur-containing compounds:** Aside from contributing to the synthesis of sufficient glutathione, multiple sulfur-containing compounds in VegeCleanse Plus™ support the sulfation mechanism of detoxification. These include L-cysteine, L-methionine, methylsulfonylmethane (MSM), N-acetyl-cysteine, taurine, and sodium sulfate. Methylation reactions involving the sulfurous compound S-adenosylmethionine (S-AdoMet) require adequate levels of vitamins B6 and B12, along with folate, for proper functioning of the methionine-homocysteine cycle.<sup>6</sup> This product contains folate as Quatrefolic®, a glucosamine salt 5-MTHF form of folate rather than synthetic folic acid. S-AdoMet is yet another precursor to glutathione and may also be protective of overall liver health.<sup>8,9</sup>

**Glucuronidation:** The glucuronidation of xenobiotics is one of the primary mechanisms for the detoxification of a host of common pharmaceutical drugs (by the enzyme UDP-glucuronosyltransferase (UGT), harmful environmental chemicals, and endogenously synthesized substrates, such as excess estrogen.<sup>10</sup> The resulting metabolites are hydrophilic, rendering them more easily excreted. Calcium d-glucarate inhibits beta-glucuronidase, a colonic bacterial enzyme capable of de-conjugating glucuronic acid-tagged toxins, which may have the undesirable result of harmful substances being reabsorbed into the body. Elevated beta-glucuronidase activity is associated with increased risk for hormone-dependent cancers, such as breast, prostate, and colon.<sup>11-13</sup>

## VegeCleanse Plus™ Features:

- 17 grams of easy-to-digest, non-GMO, low-allergen pea protein per serving
- Delicious vanilla-berry flavor
- Formulated without dairy, gluten, and lactose; sweetened with the natural herb stevia
- Can serve as a meal supplement during detoxification protocols

**Molybdenum oxotransferases:** Molybdenum is a required cofactor for a family of enzymes that includes xanthine oxidase and sulfite oxidase. A molybdenum deficiency may impair the body's ability to metabolize environmental contaminants, such as sulfur dioxide in polluted urban areas, and compounds in several commonly consumed foods, such as caffeine and the sulfites used for color retention and food preservation in wine, dried fruit, vinegar and more, and may impair brain function due to sulfite accumulation.<sup>14-16</sup>

**Antioxidants:** Phase I oxidation reactions may generate increased amounts of free radicals. VegeCleanse Plus™ provides several helpful antioxidant compounds to minimize the potential harm that may result, including vitamins C and A, vitamin E isomers (as DeltaGold® gamma and delta tocotrienols), selenium, green tea extract (standardized to contain 98% polyphenols and 45% EGCG), L-glutathione, and a proprietary blend of alkalizing high ORAC vegetable and fruit juice powders, including spinach, beet, carrot, pomegranate, and grape. Various clinical, in vivo, and animal studies indicate that, in addition to their antioxidant function, green tea polyphenols and quercetin may have stimulatory effects on select cytochrome P450 enzymes.<sup>3,6,17</sup>

**Support for healthy bile production and toxin excretion:** Products of liver detoxification are typically excreted through the gastrointestinal tract, after being secreted into the intestines via bile. Thick, sluggish or stagnant bile can result in a backup of toxins in the body. VegeCleanse Plus™ contains ingredients designed to stimulate the production of bile and the proper consistency of bile (i.e., cholagogues), so that harmful metabolites can exit the liver smoothly and proceed through the intestines in order to be excreted through the feces. These compounds include inositol, milk thistle (standardized to contain 80% silymarin), and choline (as choline dihydrogen citrate). The silymarin in milk thistle may also reduce liver oxidative stress induced by the detoxification mechanisms.<sup>18</sup>

**Glucmannan:** VegeCleanse Plus™ provides fiber, which is critical for the excretion of toxins in a timely manner. It features glucmannan, a water-soluble polysaccharide naturally occurring as a hemicellulose in the cell walls of select plant species. As a potent soluble fiber, glucmannan may reduce constipation, thereby aiding in excretion.<sup>19,20</sup>

## Supplement Facts

Serving Size 38 grams (approx. one scoop)

Servings Per Container 15

Amount Per Serving	% Daily Value	Amount Per Serving	% Daily Value	Amount Per Serving	% Daily Value
Calories	140	Phosphorus (as Dipotassium Phosphate)	100 mg 8%	L-Carnitine	500 mg †
Total Fat	1.5 g 2%*	Iodine (as Potassium Iodide)	25 mcg 17%	L-Threonine	275 mg †
Total Carbohydrate	11 g 4%*	Magnesium	100 mg 24%	L-Lysine	275 mg †
Dietary Fiber	3 g 12%*	(as TRAACS® Magnesium Bisglycinate Chelate Buffered- from Bisglycinate Chelate and Magnesium Oxide)		Calcium D-Glucarate USP	150 mg †
Total Sugar	1 g †	Zinc (as Zinc Bisglycinate Chelate)	3.5 mg 32%	L-Cysteine	125 mg †
Protein	17 g 24%*	Selenium (as Selenomethionine)	25 mcg 45%	Quercetin	100 mg †
Vitamin A (as Mixed Carotenoids from Algae)	730 mcg RAE 81%	Copper (as TRAACS® Copper Bisglycinate Chelate)	0.5 mg 56%	Taurine	100 mg †
Vitamin C (as Sodium Ascorbate)	250 mg 278%	Manganese	0.5 mg 22%	Milk Thistle ( <i>Silybum marianum</i> )(seed) [standardized to contain 80% silymarin]	100 mg †
Vitamin D (as Cholecalciferol)	0.6 mcg (25 IU) 2%	(as TRAACS® Manganese Bisglycinate Chelate)		N-Acetyl-L-Cysteine	75 mg †
Thiamin (Vitamin B-1)(as Thiamin HCl)	1.5 mg 125%	Chromium	25 mcg 71%	L-Methionine	50 mg †
Riboflavin (Vitamin B-2)	1.5 mg 115%	(as TRAACS® Chromium Nicotinate Glycinate Chelate)		Inositol	50 mg †
(as Riboflavin-5-Phosphate)		Molybdenum	25 mcg 56%	Methylsulfonylmethane (MSM)	50 mg †
Niacin (Vitamin B-3)(as Niacinamide)	4 mg NE 25%	(as TRAACS® Molybdenum Glycinate Chelate)		Sodium Sulfate	50 mg †
Vitamin B-6 (as Pyridoxal-5-Phosphate)	2 mg 118%	Choline (as Choline Dihydrogen Citrate)	20 mg 4%	Green Tea Extract ( <i>Camellia sinensis</i> )(leaves) [standardized to contain 98% polyphenols and 45% EGCG]	50 mg †
Folate	85 mcg DFE 21%	Sodium	310 mg 13%	L-Glutathione	12.5 mg †
(as Quatrefolic® [6S]-5-methyltetrahydrofolate glucosamine salt 100 mcg)		Veggie/Fruit Proprietary Blend	2.5 g †	Vitamin E Isomers	5 mg †
Vitamin B-12 (as Methylcobalamin)	2 mcg 83%	[organic spinach powder ( <i>Spinacia oleracea</i> )(leaves), organic beet juice powder ( <i>Beta vulgaris</i> )(root juice), organic carrot juice powder ( <i>Daucus carota</i> )(root juice), organic pomegranate juice powder ( <i>Punica granatum</i> )(fruit juice), organic grape juice powder ( <i>Vitis labrusca</i> )(fruit juice)]		(as DeltaGold® delta and gamma tocotrienols)	
Biotin (as d-Biotin)	70 mcg 233%	Cellulose	1.5 g †	Vanadium	25 mcg †
Pantothenic Acid (as d-Calcium Pantothenate)	12.5 mg 250%	Glycine	750 mg †	(as TRAACS® Vanadium Nicotinate Glycinate Chelate)	
Calcium (as DimaCal® Dicalcium Malate and Calcium D-Glucarate USP)	120 mg 9%	Glucmannan	500 mg †		
Iron	5 mg 28%				

\*Percent Daily Values are based on a 2,000 calorie diet.

†Daily Value not established.

**Ingredients:** Organic pea protein, natural flavors, tapioca dextrin, cellulose gum, stevia leaf extract (*Stevia rebaudiana*).

**Recommended Use:** Mix 38 grams (approx. one scoop) in eight ounces of water per day, or as directed by your health care practitioner.

For a list of references cited in this document, please visit:

<https://www.designsforhealth.com/techsheet-references/vegecleanse-plus-references.pdf>

Dosing recommendations are given for typical use based on an average 150 pound healthy adult. Healthcare practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage. Any product containing botanical substances has the potential for causing individual sensitivities. Individual monitoring, including liver function tests, may be appropriate.



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\*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

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